

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: SUWALA ET AL.

Application No. 10/790,946

Group Art Unit: 2416

Confirmation No. 2173

Examiner: ALIA, Curtis A.

Filed: March 2, 2004

For: HIERARCHICAL PROTECTION SWITCHING FRAMEWORK

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

On April 20, 2009, Appellants appealed from the final Office action mailed January 21, 2009 ("Office action"). Appellants submit this Appeal Brief and pay the requisite fee via EFS-Web. Appellants authorize the Commissioner to charge Deposit Account No. 501430 with any additional fees due in connection with the submission of this paper, and petitions for any additional extension of time which may be deemed necessary.

Moreover, Appellants respectfully submit that all pending claims are supported by the originally filed disclosure, recite patentable subject matter, and the prior art of record neither teaches nor suggests all the elements/limitations of any pending claim. Therefore, all pending claims are believed to be allowable, and the application is considered in good and proper form for allowance. Appellants respectfully requests all claim rejections be reversed and all claims be allowed. Additionally, Appellants respectfully request the Office withdraw all rejections and/or objections and allow this application in response to this reply to the final Office action

**(i) REAL PARTY IN INTEREST**

The above-identified application has been assigned to Cisco Technology, Inc. by the inventors George Suwala and David Delano Ward, with this assignment recorded in the USPTO at Reel 015040, Frame 0787, with a recordation date of March 2, 2004.

**(ii) RELATED APPEALS AND INTERFERENCES**

None.

**(iii) STATUS OF CLAIMS**

Claims 1-11, 13-18, and 20-24 are pending in the application.

Claims 12 and 19 stand as canceled.

No claims stand as objected to.

Claims 1-11, 13-18, and 20-24 stand as rejected.

Claims 1-11, 13-18, and 20-24 are on appeal in the application.

**(iv) STATUS OF AMENDMENT**

NONE.

**(v) SUMMARY OF CLAIMED SUBJECT MATTER**

There are three independent claims on appeal, claims 1, 11 and 18 related to the hierarchical protection switching framework. There are many embodiments described in the specification and illustrated in the figures, and only one or some of these embodiments is/are described herein in relation to each independent claim on appeal as required by the Rules.

Independent claim 1 recites an apparatus for protection switching, with one embodiment described in relation to FIG. 2A which is at least described on page 20, line 5 to page 21, line 25. The apparatus comprises: a detector (200); and a first protector (210) configured to perform protection switching (provide instructions 215 to protection switch mechanism 216) in response to one or more notifications of a condition (209) received from the detector (200), and to register (211) with the detector (200) to be notified of the condition; wherein the detector (200) is configured to receive one or more registration requests (211) from the first protector (210), and to notify the first protector (210) of the condition upon detection of the condition (209). Note, FIG. 3A, described at least on page 22, lines 20-26, illustrating detector 310 and protector 312, with protector 312 registering (321) with detector 310, detection of a condition (330) by detector 310, and in response, detector 310 notifying (331) protector 312 which performs protection switching (333).

Independent claim 11 recites an apparatus for protection switching, with one embodiment described in relation to FIG. 2A which is at least described on page 20, line 5 to page 21, line 25. The apparatus comprises: a detector (200) configured to detect (205) a particular condition and to notify (209) a first protector (210) of the particular condition; the first protector (210) configured to receive an indication of the particular condition (209) from the detector (200), and to identify (214) whether or not to (a) perform protection switching itself (provide instructions 215 to protection switch mechanism 216) based on the particular condition or (b) to notify (219) a second protector (220) of the particular condition for the second protector (220) to perform protection switching (provide instructions 225 to protection switch mechanism 226); and the second protector (220) configured to receive a notification

(219) of the particular condition from the first protector (210), and in response to perform protection switching (provide instructions 225 to protection switch mechanism 226) based on the particular condition; wherein said identifying whether or not to (a) perform protection switching itself (provide instructions 215 to protection switch mechanism 216) based on the particular condition (209) or (b) to notify (219) the second protector (220) of the particular condition includes: attempting by the first protector (210) to protection switch (provide instructions 215 to protection switch mechanism 216), and in response to failure of said protection switch (as determined in process block 672 of FIG. 6D, page 25, ll. 16-23), to notify (219) the second protector (220) of the particular condition.

Dependent claim 23 recites apparatus of claim 11, wherein the first protector (210) is configured to register (211) with the detector (200) for notification (209) of the particular condition.

Independent claim 18 recites an apparatus for protection switching, with one embodiment described in relation to FIG. 1A, which is at least described on page 16, line 22 to page 17, line 18, FIG. 2A which is at least described on page 20, line 5 to page 21, line 25. The apparatus comprises: a detector (104, 200) including means for detecting a particular condition [protection event detection mechanism 204, detector 104 configured to detect an event 103 (e.g., a state, change of state, error or degraded condition) of the monitored items 102 (e.g., a device, signals, data, etc.) monitored by means for detecting a particular condition], and means for notifying a first protector (210) of the particular condition (detector 200 send notification 209); the first protector (210) including means for receiving an indication of the particular condition from the detector (registration client 212 receives notification 209), and means [protection methodology / protector control unit 214 operates according to FIG. 6D, page 25, lines 6-23], for identifying whether or not (process block 666) to (a) perform protection switching itself based on the particular condition (process block 670) or (b) to notify a second protector of the particular condition for the second protector to perform protection switching (process block 668); and the second protector (220) including

means for receiving a notification (219) of the particular condition from the first protector (registration client 222), and means for performing protection switching based on the particular condition (protection methodology / protector control unit 224 provides an instruction 225 to protection switch mechanism 226); wherein said means for identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes means for attempting by the first protector to protection switch and in response to failure of said protection switch, to notify the second protector of the particular condition [protection methodology / protector control unit 214 operates according to FIG. 6D, page 25, lines 6-23, including process block 670 performing protection switch, process block 672 determining that the attempt failed, and in response, performing process blocks 674 and 668 to notify the second protector].

**(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The issues presented on appeal are listed below, and then addressed in corresponding subheadings hereinafter. Although there are additional reasons that all claims are patentably distinct over the prior art of record, Appellants have elected solely for the purposes of this Appeal Brief to limit the issues to the issues listed below and discussed *infra*. Appellants respectfully request the Board reverse all rejection/objections.

(1) Whether claims 1-2, 4-5 and 8 are unpatentable under 35 USC § 102(e) as being anticipated by Finn et al., US Patent 6,728,205.

(2) Whether claim 3 is unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Zettinger et al., US Patent Application Publication US 2004/0085895 A1.

(3) Whether claim 6 is unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Ikeda et al., US Patent 6,144,633.

(4) Whether claims 7, 9-11, 13-18, and 20-24 are unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Lindskog et al., US Patent 6,665,262 B1. (Note, claims 12 and 19 stand as cancelled; and thus, the Office action includes a typographical error listing this set of claims as 7 and 9-24.)

**(vii) ARGUMENT**

**(1) Whether claims 1-2, 4-5 and 8 are unpatentable under 35 USC § 102(e) as being anticipated by Finn et al., US Patent 6,728,205.**

Appellants respectfully request the Board reverse the anticipation rejections of independent claim 1 and its dependent claims 2, 4, 5 and 8, for at least the reasons that the Office action fails to present a *prima facie* rejection of any of these claims; and the prior art of record neither teaches nor suggests all claim limitations of any of these claims.

The MPEP and law is clear that for anticipation, the reference *must teach each and every aspect of the claimed invention* either explicitly or impliedly, and the burden is on the Office to present a *prima facie* case of anticipation. MPEP § 706.02 (emphasis added). Inherent means it *must* occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*).

For the purposes of the Appeal, Appellants will discuss the deficiencies of the Office action in this section in relation to independent claim 1, which for is reproduced below.

Claim 1 (original): An apparatus for protection switching, the apparatus comprising:

a detector; and

a first protector configured to perform protection switching in response to one or more notifications of a condition received from the detector, and to register with the detector to be notified of the condition;

wherein the detector is configured to receive one or more registration requests from the first protector, and to notify the first protector of the condition upon detection of the condition.

**(A) The Office action fails to present a *prima facie* case of anticipation as the APS processor equated to the claim limitation is not configured to detect a condition as required by the claim limitations.**

**Group: independent claim 1 and its dependent claims 2, 4, 5 and 8.**

**Representative claim for this group: independent claim 1.**

Claim 1 recites an apparatus including the element of a detector, configured to receive one or more registration requests from the first protector, and to notify the first protector of the condition upon detection of the condition. In rejecting claim 1 as being anticipated by Finn et al., the Office equates:

- APS processor 14 of FIG. 1 of Finn et al. to the claimed detector; and
- Protection Switching Module 18 of FIG. 1 of Finn et al. to be the first protector.

Office action @ page 3. Detection of a condition is known in the art as the native discover of the problem, and detection of a condition is not the same as being notified by another node of a problem. Both Appellants' disclosure (pervasively discussing the different operations of detection and notification of the condition of interest) and Finn et al. use this term consistently as the native discover of the problem. Finn et al. teaches that protection switching module 18 detects the problem, not APS processor 14. Finn et al. @ col. 16, lines 1-4 ("If link 20a fails, then protection switching module 18 detects the failure, by the absence of appropriate flow (e.g. lack of power, missing pilot tone, diagnostic signal not appropriately received"); FIG. 15, col. 41, lines 15-29 (making a distinction between nodes that detected the failure and nodes which are informed of the detection of the failure, including that only two nodes may detect a failed edge, if notification was "detection" then all nodes would "detect" the failure.) The receiving of a broadcast help message sent from another node (process block 322 of FIG. 14) is not detection of a condition as one skilled in the art would understand.

For at least this reason, the Office fails to present a *prima facie* anticipation rejection of independent claim 1 nor its dependent claims 2, 4, 5, and 8.

**(B) The Office action fails to present a *prima facie* case of anticipation for failing to present a coherent rejection of all claim limitations according to the structure of the claim.**

**Group: independent claim 1 and its dependent claims 2, 4, 5 and 8.**

**Representative claim for this group: independent claim 1.**

Claim 1 recites an apparatus including the elements of (a) a detector, and (b) a first protector. In rejecting claim 1 as being anticipated by Finn et al., the Office, on page 3 of the final Office action mailed January 21, 2009, equates:

- APS processor 14 of FIG. 1 of Finn et al. to the claimed detector; and
- Protection Switching Module 18 of FIG. 1 of Finn et al. to be the first protector.

Based on the antecedent basis principle of claim construction, a reference to "a detector" and "the detector" refer to the same element in the claim, and a reference to "a protector" and "the protector" refer to the same element in the claim. Claim 1 further includes the limitations that the first protector is configured to perform, and that the detector is configured to perform. Therefore, in order establish a *prima facie* anticipatory rejection, the Office must show that the equated elements perform these functions. More specifically, a proper rejection requires teachings by Finn et al. of:

Claim 1: An apparatus for protection switching, the apparatus comprising:

[APS processor 14]; and

[Protection Switching Module 18] configured to perform protection switching in response to one or more notifications of a condition received from [APS processor 14], and to register with [APS processor 14] to be notified of the condition;

wherein [APS processor 14] is configured to receive one or more registration requests from [Protection Switching Module 18], and to notify [Protection Switching Module 18] of the condition upon detection of the condition.

However, the Office action fails to present such a teaching by Finn et al. of the configuration of APS processor 14, and Protection Switching Module 18 of FIG. 1.



1. For the limitations of "[Protection Switching Module 18] configured to perform protection switching in response to one or more notifications of a condition received from [APS processor 14]." the Office states that this is taught by "failure message arrival at node indicating a failed line," citing Finn et al. @ col. 42, line 54 to column 43, line 4, which states:

Referring now to FIGS. 16 and 16A, the processing which takes place to restore multicast and unicast circuits on an edge or node redundant network in the event of the failure of an edge or a node is shown. Processing begins in Step 420 where nodes wait for a failure message to arrive. In an effort to promote clarity, in this particular example, a node  $n_x$  having an arc  $(n_y, n_x)$  will be considered. Thus node  $n_x$  waits for a failure message to arrive on arc  $(n_y, n_x)$ .

Once a failure message arrives, processing flows to decision block 422 where a determination is made as to whether the failure message is a new failure message. If the failure message is not a new failure message, then processing again flows to step 420 where node  $n_x$  continues to wait for a new failure message. If, on the other hand, the failure message is a new failure message, then processing proceeds to step 424 where the failure message is forwarded on all operational outgoing arcs of a secondary graph  $R_m$  from node  $n_x$  which received the failure message.

This characterization by the Office nor the citation relied upon by the Office neither teaches nor suggests that (a) [Protection Switching Module 18] receives one or more notifications of a condition received from [APS processor 14], nor (b) [Protection Switching Module 18] performs protection switching in response to said one or more notifications of the condition. As the Office action fails to present a teaching of the recited limitations, the Office action fails to establish a *prima facie* rejection of independent claim 1, nor for its dependent claims 2, 4, 5, and 8.

2. For the limitations of "[Protection Switching Module 18] configured to register with [APS processor 14] to be notified of the condition," the Office states that this is taught by "APS processor receives information concerning the number of nodes," citing Finn et al. @ col. 15, lines 29-35, with lines 26-35 stating:

As an alternative to the APS processor being provided as part of a network node as shown in FIG. 1, APS processor 14 may be provided as part of a network planning system. In this case, APS processor 14 receives information concerning the number of nodes which will be eventually included in the network or subnetwork as well as information concerning the availability or desirability of installing and/or maintaining network links between particular nodes, traffic load and cost information with respect to installation and maintenance of the links and nodes, etc . . . .

The claim recites specific structure: that the first protector is configured register with the detector to be notified of the condition, which per the application of elements of Finn et al. by the Office, equates to be [Protection Switching Module 18] configured to register with [APS processor 14] to be notified of the condition. Note, this teaching actually teaches away from the configuration illustrated in FIG. 1 earlier relied upon, as APS processor is no longer part of network node 12a, but rather a standalone system outside network node 12a.

First, as a threshold matter, the Office's rejection fails include a teaching relating to Protection Switching Module 18 which, as dictated by the structure and limitations of the claim, must be configured to perform the registration, and therefore, fails to establish a *prima facie* rejection of these limitations.

Second, this teaching is that APS processor 14 receives information. However, as the Office applied the elements of Finn et al. to the claims, it is the Protection Switching Module 18 which will receive the information.

Third, the claim requires *the first protector* to be configured to *register with the detector* to be notified of the condition, and the Office action fails to include a teaching for the act of "registering," let alone by the specified claim elements as required by the structure of the claim as discussed *supra*. The mere fact that two devices communicate, does not mean that the act of

registering is performed by one, let alone the one required by the claim limitation. A person can receive a particular magazine without that person registering (i.e., subscribing) to receive the message, as the publisher or distributor may simply acquire the address of the person and send it to the person, or another entity could have given the person a subscription. Given that the person receives the particular magazine, basic logic principles dictate that it is not a valid conclusion that the person registered to receive the magazine. Similarly, the fact that a network node receives information, does not necessarily mean that it is inherent that it *registered* to receive the information.

Therefore, the Office fails to establish a *prima facie* rejection of these claim limitations.

3. For the limitations of "[APS processor 14] is configured to receive one or more registration requests from [Protection Switching Module 18]," the Office states that this is taught by "APS processor receives information concerning the number of nodes to acquire the network topology," citing Finn et al. @ col. 15, lines 29-35, with lines 26-35 reproduced *supra*, and by "each node transmits its topology to the all other nodes, which can be interpreted as registering its position and connectivity in the network with the other nodes", citing Finn et al. @ col. 17, lines 34-40, with lines 31-40 stating:

Referring now to FIG. 1B, a flow diagram illustrating the steps to compute tree structures at individual nodes in a network is shown. Processing begins at step 24 in which all nodes exchange network topology information. Such a step may be accomplished in an existing network by transmitting the topology information to all nodes in the network using a network broadcast or multicast. Alternatively, the information may be transmitted among the nodes via so-called point-to-point transmission techniques.

The claim recites specific structure: that the detector is configured to receive one or more registration requests from the first protector, which per the application of elements of Finn et al. by the Office, equates to be [APS processor 14] to is configured to receive one or more registration requests from [Protection Switching Module 18]. The Office presents no teaching that APS processor receives registration requests from [Protection Switching Module 18].

Appellants do not concede that the distributing network information is equivalent to "receiving one or more registration requests." The Office action states that this registration information is network topology information, without providing a teaching that [Protection Switching Module 18] ever has the network topology information that is distributed. For at least these reasons, the Office action fails to present teachings of [APS processor 14] being configured to receive one or more registration requests from [Protection Switching Module 18]," and therefore, neither teaches nor suggests the detector being configured to receive one or more registration requests from the first protector. For at least these reasons, the Office fails to establish a *prima facie* rejection of these claim limitations.

4. For the limitation of "[APS processor 14] is configured to notify [Protection Switching Module 18] of the condition upon detection of the condition," the Office states that this is taught by "information concerning the nodes and links and preferred paths among nodes stored in routing table can be accessed and used to automatically re-route the signals through the secondary or protection path," citing Finn et al. @ col. 15, lines 57-65; and continues stating "upon detection of a failure a help message is broadcast to the nodes in the network to inform them to perform protection switching where needed," citing Finn et al. @ col. 40, lines 40-50.

The claim recites specific structure: the detector being configured to notify the first protector of the condition upon detection of the condition, which per the application of elements of Finn et al. by the Office, equates to be [APS processor 14] being configured to notify [Protection Switching Module 18] of the condition upon detection of the condition. As discussed in section (vi)(1)(A) *supra*, APS processor 14 does not detect the condition. Further, the Office relies upon "nodes" performing functions, where the claims require the detector and the first protector to perform functions, not the apparatus comprising these claim elements. For at least these reasons, the Office fails to present a *prima facie* rejection for these limitations of claim 1.

For at least these reasons, the Office fails to present a *prima facie* anticipation rejection of independent claim 1 nor its dependent claims 2, 4, 5, and 8.

**(2) Whether claim 3 is unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Zettinger et al., US Patent Application Publication US 2004/0085895 A1.**

Claim 3 depends from independent claim 1, and includes all of the elements/limitations of independent claim 1. The Office relies on its complete statement of rejection of independent claim 1 in the Office action. Therefore, Appellants respectfully submit that the Office fails to establish a *prima facie* rejection of dependent claim 3, and claim 3 is allowable, for at least the reasons discussed herein in relation to independent claim 1.

**(3) Whether claim 6 is unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Ikeda et al., US Patent 6,144,633.**

Claim 6 depends from independent claim 1, and includes all of the elements/limitations of independent claim 1. The Office relies on its complete statement of rejection of independent claim 1 in the Office action. Therefore, Appellants respectfully submit that the Office fails to establish a *prima facie* rejection of dependent claim 6, and claim 6 is allowable, for at least the reasons discussed herein in relation to independent claim 1.

**(4) Whether claims 7, 9-11, 13-18, and 20-24 are unpatentable under 35 USC § 103(a) as being unpatentable by Finn et al., US Patent 6,728,205, in view of Lindskog et al., US Patent 6,665,262 B1.** (Note, claims 12 and 19 stand as cancelled; and thus, the Office action includes a typographical error listing this set of claims as 7 and 9-24.)

It is well-established law that the burden is on the Office to initially present a *prima facie* unpatentability (e.g., anticipation, obvious) rejection, before Applicant has any burden of proof of disproving any application of a cited reference against a claim. *In re Warner*, 379 F2d. 1011, 1016, 154 USPA 173, 177 (C.C.P.A. 1967); *Ex parte Skinner*, 2 USPQ2d 1788, 1788-89 (B.P.A.I. 1986). The MPEP and law is clear that for anticipation, the reference *must teach each and every aspect of the claimed invention* either explicitly or impliedly, and the burden is on the Office to present a *prima facie* case of anticipation. MPEP § 706.02 (emphasis added). Inherent means it *must* occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*).

**(A) The Office action fails to present a *prima facie* rejection of dependent claims 7, 9 and 10, for at least the reasons presented herein in regards to independent claim 1, from which each of claims 7, 9 and 10 depends.**

Each of claims 7, 9 and 10 depends from independent claim 1, and includes all of the elements/limitations of independent claim 1. The Office apparently relies on its complete statement of rejection of independent claim 1 in the Office action. Therefore, Appellants respectfully submit that the Office fails to establish a *prima facie* rejection of each of dependent claims 7, 9 and 10, and each of dependent claims 7, 9 and 10 is allowable, for at least the reasons discussed herein in relation to independent claim 1.

**(B) The Office action fails to present a *prima facie* case of obviousness as the APS processor equated to the claim limitation is not configured to detect a condition as required by the claim limitations.**

**Group: independent claim 11 and its dependent claims 13-17 and 23-24.**

**Representative claim for this group: independent claim 11.**

Claim 11 recites an apparatus including the element a detector configured to detect a particular condition and to notify a first protector of the particular condition. In rejecting claim 11, the Office relies on APS processor 14 of FIG. 1 of Finn et al. to teach the claimed detector; and Protection Switching Module 18 as the claimed first protector. Office action @ page 13. Detection of a condition is known in the art as the native discover of the problem, and detection of a condition is not the same as being notified by another node of a problem. Both Appellants' disclosure (pervasively discussing the different operations of detection and notification of the condition of interest) and Finn et al. use this term consistently as the native discover of the problem. Finn et al. teaches that protection switching module 18 detects the problem, not APS processor 14. Finn et al. @ col. 16, lines 1-4 ("If link 20a fails, then protection switching module 18 detects the failure, by the absence of appropriate flow (e.g. lack of power, missing pilot tone, diagnostic signal not appropriately received)"); FIG. 15, col. 41, lines 15-29 (making a distinction between nodes that detected the failure and nodes which are informed of the detection of the failure, including that only two nodes may detect a failed edge, if notification was "detection" then all nodes would "detect" the failure.) The receiving of a broadcast help message sent from another node (process block 322 of FIG. 14) is not detection of a condition as one skilled in the art would understand.

For at least this reason, the Office fails to present a *prima facie* anticipation rejection of independent claim 11 nor its dependent claims 13-17 and 23-24.

**(C) The Office action fails to present a *prima facie* case of obviousness as the APS processor equated to the claim limitation is not configured to detect a condition as required by the claim limitations.**

**Group: independent claim 18 and its dependent claims 20-22.**

**Representative claim for this group: independent claim 18.**

Claim 12 recites an apparatus including the elements of a detector including means for detecting a particular condition, and means for notifying a first protector of the particular condition. The claim construction of the limitation of means for detecting a particular condition falls under 35 USC 112, sixth paragraph ("An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof).

In rejecting claim 11, the Office relies on APS processor 14 of FIG. 1 of Finn et al. to the claimed detector. Office action @ page 18. The Office action didn't provide a citation, but it would be reasonable to assume that it would be the same as for claim 11, with that being Finn et al., col. 40, lines 40-50, describing FIG. 14, with includes process block 322: Broadcast Help Message.

Detection of a condition is known in the art as the native discover of the problem, and detection of a condition is not the same as being notified by another node of a problem. Both Appellants' disclosure (pervasively discussing the different operations of detection and notification of the condition of interest) and Finn et al. use this term consistently as the native discover of the problem. As disclosed in the specification, this limitation corresponds to: a detector (104, 200) including means for detecting a particular condition [protection event detection mechanism 204, detector 104 configured to detect an event 103 (e.g., a state, change of state, error or degraded condition) of the monitored items 102 (e.g., a device, signals, data, etc.) monitored by means for detecting a particular condition]. Appellants original disclosure, FIG. 1A, which is at least described on page 16, line 22 to page 17, line 18, FIG. 2A which is at least



described on page 20, line 5 to page 21, line 25. The receiving of a broadcast help message sent from another node (process block 322 of FIG. 14) is not detection of a condition as one skilled in the art would understand. Nor is receiving a broadcast help message sent from another node equivalent to the detection of a condition. Appellants disclosure refer to this as a "notification" message, which are sent to "protectors;" and a protector and a detector, as described in the specification, are not equivalents of each other.

For at least these reasons, Finn et al.'s APS processor 14 neither teaches nor suggests the recited claim limitation of "a detector including means for detecting a particular condition."

For at least this reason, the Office fails to present a *prima facie* anticipation rejection of independent claim 18 nor its dependent claims 20-22.

**(D) The Office action fails to present a *prima facie* case of obviousness as the prior art of record fails to teach or suggest the first protector (a) be configured for, or (b) include means for element configured for: attempting to protection switch, and in response to failure of such, to notify the second protector.**

**Group: independent claim 11 and its dependent claims 13-17 and 23-24; and independent claim 18 and its dependent claims 20-22.**

**Representative claim for this group: independent claim 11.**

Claim 11 recites the limitation of: wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes: attempting by the first protector to protection switch, and in response to failure of said protection switch, to notify the second protector of the particular condition. In rejecting this limitation, the Office states that each node is capable of making a decision whether it can fix a fault, and if it cannot, it forwards an alarm message to an interconnected fault agent, citing Lindsborg et al., col. 3, lines 28-34, which are reproduced hereinafter.

As faults are detected in the communications network, alarms are sent from one node to the next by the fault agents that reside in the various nodes. In particular, when a fault agent receives alarm data, either from a subordinate fault agent or from a network resource, the fault agent analyzes the received alarm data to identify a cause of the alarm and to determine if the underlying fault that caused the alarm can be handled at the current node. If not, then the fault agent produces a new alarm, which summarizes the received alarm data, and passes the new alarm to an interconnected fault agent..

The claim recites specific actions: "attempting by the first protector to protection switch, and in response to failure of said protection switch, to notify the second protector of the particular condition." Lindsborg et al. teaches that it "analyzes the received alarm data" and therefore, does not protection switch if the alarm cannot be handled in the current node. Analyzing data is quite different than actually protection switching as recited in the claim. As Lindsborg et al. neither teaches nor suggests performing protection switching and in response to failure of said protection switch, to notify the second protector of the particular condition.

For at least these reasons, the Office action has failed to establish a *prima facie* rejection of independent claim 11. For at least these reasons, Appellants respectfully request the Board reverse the rejections of independent claim 11 and its dependent claims 13-17 and 23-24; and independent claim 18 and its dependent claims 20-22.

**(E) The Office action fails to present a *prima facie* case of anticipation for failing to present a coherent rejection of all claim limitations according to the structure of the claim.**

**Group: independent dependent claim 23 and its dependent claims 24.**

**Representative claim for this group: independent claim 23.**

Claim 23, via its independent claim 11, recites an apparatus including the elements of (a) a detector, and (b) a first protector. In rejecting claim 11, the Office, on page 13 of the Office, equates:

- APS processor 14 of FIG. 1 of Finn et al. to the claimed detector; and
- Protection Switching Module 18 of FIG. 1 of Finn et al. to be the first protector.

Claim 23 recites "The apparatus of claim 11, wherein the first protector is configured to register with the detector for notification of the particular condition," which includes specific structure. Based on the Office's application of elements of Finn et al., in order to provide a proper rejection based on teachings of Finn et al., the Office would need to show that Finn et al. teaches:

[Protection Switching Module 18] is configured to register with [APS processor 14] for notification of the particular condition.

However, the Office rejects this claim based on "APS processor receives information concerning the number of nodes," citing Finn et al. @ col. 15, lines 29-35; and "the information received from all of the nodes is stored into the routing table for computing the working and protection topologies," citing Finn et al. @ col. 15, lines 44-52.

First, as a threshold matter, the Office's rejection fails include a teaching relating to Protection Switching Module 18 which, as dictated by the structure and limitations of the claim, must be configured to perform the registration, and therefore, fails to establish a *prima facie* rejection of these limitations.

Second, this teaching is that APS processor 14 receives information. However, as the Office applied the elements of Finn et al. to the claims, it is the Protection Switching Module 18 which will receive the notification of the particular condition.

Third, the claim requires *the first protector* to be configured to *register* with *the detector* to be notified of the condition, and the Office action fails to include a teaching for the act of "registering," let alone by the specified claim elements as required by the structure of the claim as discussed *supra*. The mere fact that two devices communicate, does not mean that the act of registering is performed by one, let alone the one required by the claim limitation. A person can receive a particular magazine without that person registering (i.e., subscribing) to receive the message, as the publisher or distributor may simply acquire the address of the person and send it to the person, or another entity could have given the person a subscription. Given that the person receives the particular magazine, basic logic principles dictate that it is not a valid conclusion that the person registered to receive the magazine. Similarly, the fact that a network node receives information, does not necessarily mean that it is inherent that it *registered* to receive the information.

For at least these reasons, the Office fails to establish a *prima facie* rejection of claim 23. For at least these reasons, Appellants respectfully request the Board reverse the rejections of claims 23 and 24.

FINAL REMARKS. For at least these reasons, Appellants respectfully request the rejections of all pending claims be reversed. Moreover, as the prior art of record, alone or in combination, neither teaches nor suggests all recited elements/limitations of any pending claim for at least the reasons presented herein, including those reasons that the Office fails to establish a *prima facie* rejection: all claims are believed to be allowable. Therefore, assuming the Office performed its duty as required by MPEP § 706 and 37 CFR 1.104(c)(2) and cited the best art available, then *all claims are allowable over the best prior art available*. As such, Appellants respectfully request all rejections be reversed, all claims be allowed, and the application be passed to issuance. Additionally, Appellants request the Office withdraw all rejections and/or objections and allow the case in response to this reply to the final Office action.

Respectfully submitted,  
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By



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**(viii) CLAIMS APPENDIX**

1. An apparatus for protection switching, the apparatus comprising:  
a detector; and

a first protector configured to perform protection switching in response to one or more notifications of a condition received from the detector, and to register with the detector to be notified of the condition;

wherein the detector is configured to receive one or more registration requests from the first protector, and to notify the first protector of the condition upon detection of the condition.

2. The apparatus of claim 1, wherein said protection switching includes switching the physical path of traffic from a working facility to a backup facility while maintaining an UP state indication of a single logical interface including the working facility and the backup facility such that higher-level routing information does not change in response to said switching the physical path.

3. The apparatus of claim 1, wherein said protection switching includes switching traffic to a backup facility from a facility corresponding to the condition.

4. The apparatus of claim 1, wherein said protection switching includes switching traffic to a backup component from a component corresponding to the condition.

5. The apparatus of claim 1, further comprising a second protector;  
wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition;  
wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition, and to register with the detector to be notified of the particular condition; and  
wherein the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition.

6. The apparatus of claim 1, further comprising a second protector;  
wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition;  
wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if previously notified of another particular condition else not to notify the second protector of the particular condition, and to register with the detector to be notified of the particular condition; and  
wherein the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition.

7. The apparatus of claim 1, further comprising a second protector;

wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition;

wherein the first protector is configured to receive one or more registration requests from the second protector, to notify the second protector upon notification of the particular condition if not previously notified of another particular condition else not to notify the second protector of the particular condition, and to register with the detector to be notified of the particular condition; and

wherein the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition.

8. The apparatus of claim 1, further comprising a second protector;

wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector and the detector, to register with the first protector to be notified of a particular condition, and to register with the detector to be notified of a second particular condition;

wherein the first protector is configured to send a notification of the particular condition to the second protector in response to the notification of the particular condition by the detector, and register with the detector to be notified of the particular condition; and

wherein the detector is configured to receive one or more registration requests from the first and second protectors, to notify the first protector upon detection of the particular condition, and to notify the second protector upon detection of the second particular condition.



9. The apparatus of claim 1, further comprising a second protector;
- wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of a particular condition;
- wherein the first protector is configured to receive one or more registration requests from the second protector, and to register with the detector to be notified of the particular condition;
- wherein the detector is configured to identify the particular condition, and to notify the first protector of the particular condition upon detection of the particular condition; and
- wherein the first protector is further configured to attempt to protection switch upon notification of the particular condition, and in response to said attempted protection switch failing, notifying the second protector of the particular condition, else not notifying the second protector of the particular condition.

10. The apparatus of claim 1, further comprising a second protector and a third protector;

wherein the second protector is configured to perform protection switching in response to one or more notifications received from the first protector, and to register with the first protector to be notified of the condition;

wherein the first protector is configured to receive one or more registration requests from the second protector, and to determine whether or not to cause a protection switch or to notify the second protector of the condition;

wherein the third protector is configured to perform protection switching in response to one or more notifications received from the second protector, and to register with the second protector to be notified of the condition; and

wherein the second protector is configured to receive one or more registration requests from the third protector, and to determine whether or not to cause a protection switch or to notify the third protector of the condition.

11. An apparatus for protection switching, the apparatus comprising:
- a detector configured to detect a particular condition and to notify a first protector of the particular condition;
  - the first protector configured to receive an indication of the particular condition from the detector, and to identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify a second protector of the particular condition for the second protector to perform protection switching; and
  - the second protector configured to receive a notification of the particular condition from the first protector, and in response to perform protection switching based on the particular condition;
- wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes: attempting by the first protector to protection switch, and in response to failure of said protection switch, to notify the second protector of the particular condition.
13. The apparatus of claim 11, wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes referencing a data structure to identify whether or not a second particular condition has been previously identified by the detector.
14. The apparatus of claim 11, wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition is determined based on a fixed or programmed set of rules or user configuration commands.
15. The apparatus of claim 11, wherein the detector is further configured to detect a second particular condition and to notify the second protector of the second particular condition.

16. The apparatus of claim 15, wherein the second protector is configured to receive an indication of the second particular condition from the detector, and to identifying whether or not to (a) perform protection switching itself based on the second particular condition or (b) to notify a third protector of the second particular condition for the third protector to perform protection switching.

17. The apparatus of claim 16, wherein said identifying whether or not to (a) perform protection switching itself based on the second particular condition or (b) to notify the third protector of the second particular condition is determined based on a fixed or programmed set of rules or user configuration commands.

18. An apparatus for protection switching, the apparatus comprising:  
a detector including means for detecting a particular condition, and means for notifying a first protector of the particular condition;  
the first protector including means for receiving an indication of the particular condition from the detector, and means for identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify a second protector of the particular condition for the second protector to perform protection switching; and  
the second protector including means for receiving a notification of the particular condition from the first protector, and means for performing protection switching based on the particular condition;  
wherein said means for identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes means for attempting by the first protector to protection switch and in response to failure of said protection switch, to notify the second protector of the particular condition.

20. The apparatus of claim 18, wherein said identifying whether or not to (a) perform protection switching itself based on the particular condition or (b) to notify the second protector of the particular condition includes means for referencing a data structure to identify whether or not a second particular condition has been previously identified by the detector.

21. The apparatus of claim 18, wherein the detector includes means for detecting a second particular condition and means for notifying the second protector of the second particular condition.

22. The apparatus of claim 21, wherein the second protector includes means for receiving an indication of the second particular condition from the detector, and means for identifying whether or not to (a) perform protection switching itself based on the second particular condition or (b) to notify a third protector of the second particular condition for the third protector to perform protection switching.

23. The apparatus of claim 11, wherein the first protector is configured to register with the detector for notification of the particular condition.

24. The apparatus of claim 23, wherein the second protector is configured to register with the first protector for notification of the particular condition.

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APPEAL BRIEF

**(ix) EVIDENCE APPENDIX**

NONE.

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**(x) RELATED PROCEEDINGS APPENDIX**

NONE.